

REMARKS/ARGUMENTS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1, 2, 5-7, 9-14, 16 and 21-27 are pending, with Claims 3-4, 8, 15 and 17-20 canceled, Claims 1, 5-7, 9-13 and 16 amended, and Claims 21-27 added by the present Amendment.

In the Official Action, Claims 1-3 and 4-20 were rejected under 35 U.S.C. § 112, second paragraph; Claims 1-3, 5-6, 8-13 and 15-20 were rejected under 35 U.S.C. § 102(b) as anticipated by Nounin et al. (U.S. Patent No. 5,802,469, hereinafter Nounin); and Claims 7 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Nounin in view of Ohno et al. (U.S. Patent No. 6,219,715, hereinafter Ohno).

Applicants acknowledge with appreciation the personal interview between the Examiner, the Examiner's supervisor and Applicants' representative on August 3, 2006. During the interview, Applicants' claims and figures were compared to the Nounin reference. The Examiners appeared to acknowledge that the ARP processing described in column 6 of Nounin did not explicitly disclose Applicants' claimed protocol processing. However, the Examiners did suggest that the claimed protocol processing of was inherent in the ARP processing of Nounin. Applicants' representative noted that no statement of inherency was included in the Official Action and reviewed the requirements for assertions of inherency, pointing out that for any such assertion, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' The Examiners also appeared to concede that the ARP processing described in column 6 was performed in terminal 105, which is contrary to the claimed invention which recites that the protocol processing is performed in a packet relay device which receives information from the mobile terminal.

During the interview, the Examiners pointed out that the system of Nounin shown in Figure 3 and described in column 8, line 41 - column 9, line 28 (see particularly column 8, line 65- column 9, line 12) indicates that "The terminal 105, when the [bidirectional] channel is connected, transmits the message of request service for requesting information of video picture or the like to the first base station 101, together with the second physical address and second logical address (#204). The first base station 101, when receiving the message of request service from the terminal 105, transmits the second physical address and second logical address of the terminal and the request service message to the second base station 103 through the network (#205). The service requested by the terminal is provided from the network, and is transmitted to the terminal 105 through the unidirectional channel 5 from the second base station 103 (#206). At this time, the second physical address and second logical address for identifying the terminal are added to the information."

The Examiners noted that this process corresponds to the invention recited in Claim 1 (as well as the other independent claims), and that Applicants' claimed protocol processing was inherently present in one or more of Nounin's network, first base station or second base station. The Examiners further commented that the claimed packet relay device and second base station are different devices is design choice. No agreement was reached.

In light of the Examiners indication that it might be possible to distinguish over Nounin by defining within the claims the term "protocol processing," Applicants' independent claims are amended or drafted to define that protocol processing as being processing for retrieving data from and/or sending data to the first sub-network from the radio terminal through the second sub-network.

Claim 1 is amended to delete the term "existence" from the claims. Thus, the rejection under 35 U.S.C. § 112, second paragraph is overcome.

New Claim 23 corresponds to cancelled Claim 15, but with limitations previously recited in the preamble moved to the body of the claim, thus is directed to a method corresponding to the system recited in Claim 1. New Claims 21 and 22 correspond to Claims 3 and 8 redrafted to move limitations from the preamble to the body of the claim. New Claims 24 and 26 are method and computer program product claims, respectively, corresponding to the apparatus recited in Claim 21. New Claims 25 and 27 are method and computer program product claims, respectively, corresponding to the apparatus recited in Claim 22. Claims 5-7, 9-13 and 16 are amended to update their dependency in view of the cancellation of Claims 3, 8, 15 and 17-20 and the addition of new Claims 21-26. Support for all amendments and new claims is found in Applicants' originally filed specification.¹ No new matter is added.

Briefly recapitulating, Claim 1 is directed to a network system, including a radio terminal having a first communication interface usable for reception only and a second communication interface usable for transmission and reception; a first sub-network to which the radio terminal is connected through a radio base station of a downlink radio network by using the first communication interface; and a second sub-network to which the radio terminal is connected through a bidirectional communication network by using the second communication interface. The second sub-network is connected with the first sub-network through a backbone network. The network system also includes a packet relay device, located in the first sub-network, configured to receive a request message requesting a protocol processing for retrieving data from and/or sending data to the first sub-network from the radio terminal through the second sub-network, and carry out the protocol processing on the first sub-network according to the request message on behalf of the radio terminal, such that a response message corresponding to the request message obtained by the

¹ Specification, page 19, lines 17-24 and page 28, line 32 – page 29, line 3.

protocol processing is returned from the first sub-network to the radio terminal through the downlink radio network or the bidirectional communication network, the request message being transmitted through the first communication interface and then broadcast, multicast or unicast on the first sub-network when the radio terminal is capable of transmitting data to the first sub-network through the first communication interface. The radio terminal is configured to receive a notification message indicating an address of the packet relay device on the first sub-network through the downlink radio network by using the first communication interface when the radio terminal enters a radio area of the radio base station, and is configured to transmit the request message after receiving the notification message at the first communication interface. The radio terminal is further configured to process the response message received by the first or second communication interface.

Nounin describes a portable terminal including a first store for storing a first physical address including a serial number of the terminal, a second store for storing a first logical address including a subscriber's telephone number, a third store for storing a second physical address of a hardware used for computer communication, a fourth store for storing a second logical address corresponding to the second physical address, an interface for a radio LAN, and an interface for a PHS system. When a call is originated, a first channel is connected by using the first physical address and the first logical address. The second physical address and the second logical address are transmitted to the network from the call originator's terminal through the first channel, thereby setting in a state enabling communication between computers, and data is transmitted to the call originator's terminal through a second channel via communication between computers.²

The Office Action asserts that Nounin discloses a base station receiving and processing requests from radio terminal via a plurality of protocols, and that therefore

² Nounin, Abstract.

Nounin's system is performing Applicants' claimed protocol processing. To support this assertion, the Office Action points to Nounin at column 6, lines 60-65 which recites:

In the LAN for computer communication, when communicating with the other party, an ARP (Address Resolution Protocol) is used for discrete control of the correspondence of the MAC address and IP address. In this system, however, since bi-directional radio transmission is not done through the radio LAN interface, ARP through radio LAN interface cannot be executed.

However, this passage of Nounin merely discloses that an address resolution protocol (ARP) is used for discrete control of the correspondence of the MAC address and the IP address.³ Nowhere does Nounin disclose or suggest that protocol processing is done *in response to a request message on behalf of the radio terminal*. Applicants submit that merely using an address resolution protocol (ARP), as disclosed by Nounin, *is not* equivalent to a base station receiving and processing requests from a radio terminal via a plurality of protocols, as recited in Claim 1. Furthermore, this ARP operation is performed at the mobile terminal, which is contrary to Applicants' claimed invention.

Furthermore, Nounin does not disclose or suggest Applicants' claimed first and second sub-networks connected through a backbone network. Nounin also fails to disclose or suggest Applicants' claimed first sub-network or a packet relay device in the first sub-network. In Applicants' claimed and disclosed invention, the packet relay device is separate from either of the base stations. Applicants' claimed first base station is located between the radio terminal and the first sub-network, while the claimed packet relay device is in the first sub-network.⁴ Accordingly, Nounin also fails to teach or suggest "the packet relay device receives a request message requesting a protocol processing with respect to the first sub-network from the radio terminal through the second sub-network," as claimed in independent Claim 1. Nounin merely discloses that the terminal notifies the second base station of the

³ See Nounin at column 6, lines 62-66.

⁴ See for example in Applicants' Specification in the 3rd and 6th paragraph, and in Claim 1.

second addresses regarding the second channel of the terminal via the first base station (the first channel.

Furthmore, Nounin fails to disclose or suggest Applicants' claimed protocol processing for retrieving data from and/or sending data to the first sub-network from the radio terminal through the second sub-network. Nounin also fails to disclose or suggest Applicants' claimed request message being transmitted through the first communication interface and then broadcast, multicast or unicast on the first sub-network when the radio terminal is capable of transmitting data to the first sub-network through the first communication interface.

MPEP § 2131 notes that "[a] claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). See also MPEP § 2131.02. "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989). Because Nounin does not disclose or suggest all the features recited in Claim 1, Nounin does not anticipate the invention recited in Claim 1, and all claims depending therefrom. Applicants submit that independent Claims 21-27 are patentable, and all claims depending therefrom, for the same reasons as presented for Claim 1.

Applicants have considered Ohno and submit that Ohno does not remedy the deficiencies Nounin. Ohno discloses an automatic address distributing system, and is silent on the features noted above.

Accordingly, in view of the present amendment and in light of the previous discussion, Applicants respectfully submit that the present application is in condition for allowance and respectfully request an early and favorable action to that effect.

Respectfully submitted,

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